

September 23, 2016

Master theses available

	Topic	Student/s required
1	<i>Construction of Pedeferri Diagrams for stainless steels in chloride-containing environment: state of the art, definition of the experimental method, study of the effect of metallurgical and environmental parameters on localized corrosion and re-passivation condition</i>	Full
2	<i>Intermittent cathodic protection of carbon steel in soil and seawater: effect on potential monitoring and corrosion rate.</i>	Full
3	<i>A.C. corrosion mechanism of carbon steel in cathodic protection condition: literature review updating, experimental confirmation of the proposed model, effect of A.C. on active-passive metals, critical comparison with the international standard</i>	1 student MD
4	<i>Corrosion rate evaluation in waters: effect of oxygen and chlorine concentration, temperature, scaling and deposits. Aim of the thesis is the validation of proposed empirical equation, by means of literature review and experimental testing.</i>	1 student MD
5	<i>Evaluation of the inhibition efficiency of a new corrosion inhibitor in reinforced concrete</i>	1 student MD
6	<i>Optimization of oxidation resistance of commercial purity titanium by anodizing treatments</i>	1 student MD
7	<i>Degradation of pollutants by means of anodic titanium dioxide nanotubes</i>	1 student MD from Jan 2017
8	<i>Evaluation of corrosiveness of ionic liquids towards steel alloys</i>	1 student MD
9	<i>Optimization of optical and photocatalytic properties of TiO₂ nanopowders for building materials and/or antifouling membranes for water purification</i>	1 student MD from Jan 2017
10	<i>Evaluation of nanocellulose as admixture for building materials (in collaboration with prof. Vismara)</i>	1 student MD
BD1	<i>Sol-gel TiO₂ coatings for corrosion protection of carbon steel and aluminum</i>	1 student BD
BD2	<i>Production of nanotubular valve metal oxides and their characterization</i>	1 group BD
BD3	<i>Optimization of oxidation resistance of commercial purity titanium by anodizing treatments</i>	1 student BD